FACILITY STATUS CHANGE FORM

Date Submitted:	Area:	Control #:
June 25, 2012	300 Area	D4-300-061
Originator:	**Facility ID:**	
John Harrie	308	
Phone:	**Action Memorandum:**	
509.308.9935	Action Memorandum #3	

This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.

Section 1: Facility Status

☐ All D4 operations required by action memo complete.

☒ D4 operations required by action memo partially complete, remaining operations deferred.

Description of Completed Activities and Current Conditions:

Deactivation: Utility isolations were performed on the facility prior to beginning facility decontamination.

The following hazardous materials were removed prior to facility demolition: contaminated glove boxes, ducting, lead, asbestos, beryllium, mercury, batteries, Freon, oil, light ballasts, HEPA filters and miscellaneous construction materials. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work for 300 Area Facilities*, DOE/RL-2004-77, Revision 2 (RAWP).

Demolition: Above-grade demolition of the 308 Building was completed in April of 2012. Below-grade demolition of the 308 foundation was completed in June of 2012. The building debris were removed and disposed of at ERDF. The demolition was performed under Radiological and Industrial Hygiene controls.

Description of Deferral (as applicable):

Backfill of the 308 Building excavation was deferred to allow for construction of transportation ramp to remove the adjacent 308A TRIGA Reactor.

Section 2: Underlying Soil Status

☐ No waste site(s) present. No additional actions anticipated.

☒ Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.

☐ Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned.

Cleanup and closeout to be addressed under Record of Decision.

Description of Current/As-Left Conditions:

The 308 Building and foundations were removed. Comprehensive GPERS surveys are included as attachments 3, 4, and 5, respectively. GPERS surveys discovered no gross soil contamination, but background from a nearby radioactive material area at the 325 Building did influence survey results on the west side of the 308 footprint. Samples were taken to confirm soil conditions and are included as attachment 6. No anomalies in the completed excavation were noted. The excavation was not backfilled as described above.

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):

300-214, 300-15, 300-RRLWS piping were removed to the limits of the excavation layback.

The following rejected UICs were decommissioned during demolition:
UIC - 300-72, Misc. Stream #404 - removed.
UIC - 300-73, Misc. Stream # 405 - removed.
UIC - 300-74, Misc. Stream # 406 - removed.

FACILITY STATUS CHANGE FORM

Section 3: List of Attachments

1. Facility information (building history, characterization and identification of documented waste sites).
2. Project photographs.
3. GPERS Survey, Composite Gamma Map, Alpha scaled to Am-141
4. GPERS Survey, Composite Gamma Map
5. GPERS Survey, Composite Beta Map
6. Radiological Soil Sample Locations and Results

DOE-RL	Date 6/21/12
Lead Regulator ☒ EPA ☐ Ecology	Date 6/25/12

DISTRIBUTION:

EPA: Larry Gadbois, B1-46
Ecology: Rick Bond, H0-57
DOE: Rudy Guercia, A3-04
Document Control, H0-30
Administrative Record, H6-08

SIS Coordinator: Ben Cowin, H4-22
D4 EPL: Chris Strand, L7-10
Sample Design/Cleanup Verification: Megan Proctor, H4-22
FR Engineering: Jason Olsson, L6-06
FR EPL: Chris Strand, L7-10

Attachment 1: Facility Information

Building History:

The 308 Fuels Development Laboratory was constructed in 1960. The two story building had a bolted steel framework with reinforced concrete and exterior walls made of reinforced concrete and concrete block. Interior walls were concrete block with plastic and polyvinyl chloride finish.

In 1971 a 7,000 square-feet addition (308-A) was constructed on the northeast corner for the Fast Flux Test Facility (FFTF) fuel assembly. In 1979 a shipping and receiving annex was constructed on the east side of 308, which brought the total area of the 308 facility to 71,000 square-feet.

From 1960 to 1968, 308 supported the Plutonium Recycle test Reactor (PRT) mission to evaluate use of plutonium as nuclear fuel. Between 1968 and 1972, 308 Building's primary mission changed to support fuel fabrication for the FFTF reactor. Plutonium oxide pellet fabrication activities were discontinued in 1986. Test Pin and fuel assembly fabrication activities were discontinued in 1990. Special nuclear material (SNM) removal was completed in May of 1992 and the deactivation work that began in 1986 was completed in June of 1996 with the transition from Westinghouse to Bechtel Hanford for surveillance and maintenance.

Planning and documentation for the removal of 308 was completed in August of 2009. Deactivation and decontamination was finished in February of 2012. Above grade demolition was completed in April of 2012 with below-grade demolition and load-out being completed in June of 2012. Backfill of the 308 Building excavation has been deferred to allow construction of a transportation ramp to access the adjacent 308-A TRIGA Reactor for removal.

Asbestos abatement included vermiculite in the cinderblock walls, TSI pipe and duct insulation, Class II floor tiles, and additional Class I ACM. Abatement activities were performed under Type I and Craft and Multi-Use Craft work packages.

The 308 Building was located in the central 300 Area bounded by Spruce Street to the north, New Mexico Avenue to the east, Redwood Street to the south and California Avenue to the west.

Building Characterization:

Table 1 summarizes the industrial hygiene, radiological control, and asbestos samples collected in the 308 Building.

Table 1. Summary of Characterization Surveys at the 308 Building.

Type	Date	Documented In	Results Summary
Pre-Demolition			
Asbestos	May 8, 2007 August 20, 2007 February 7, 2011	CNN # 133644 CNN # 135276 CNN # 156298	ACM was identified in Floor tile and mastic, roofing, TSI pipe insulation, and vermiculite in the cinder block walls.
IH Surveys and Beryllium Characterization	November 20, 2003 January 22, 2008 March 17, 2008 May 6, 2008 June 27, 2010 January 11, 2011	CNN # 111111 CNN # 137591 (135006) CNN # 138600 CNN # 139330 CNN # 152071 CNN # 154715	Be, Pb, Cd & Cr were identified and demolition work was performed under Industrial Hygiene Workplan, Beryllium Work Permit, monthly sample routines and weekly air sampling in rooms 8-16.
Radiological Surveys	January 18, 2006 February 1, 2006 February 2, 2006 February 8, 2006 February 9, 2006 April 5, 2007 April 11, 2007 April 12. 2007 May 3, 2007 May 7, 2007 May 8, 2007 May 14, 2007 July 11, 2007 February 7, 2008 July 10, 2008 August 28, 2008 September 8, 2008	RSR-300PS-06-0123 RSR-300PS-06-0210 RSR-300PS-06-0223 RSR-300PS-06-0273 RSR-300PS-06-0282 RSR-300PS-07-0707 RSR-300PS-07-0744 RSR-300PS-07-0745 RSR-300PS-07-0883 RSR-300PS-07-0884 RSR-300PS-07-0900 RSR-300PS-07-0919 RSR-300PS-07-1308 RSR-300PS-08-0425 RSR-300PS-08-2162 RSR-300PS-08-2699 RSR-300PS-08-2797	Field surveys, sampling and non-destructive-analyses (NDA) were performed. Highly contaminated items were removed or fixed in-place, such as ducting, gloves boxes and the RLWS

Associated WIDs sites:

300-214, 300-15, and 300-RRLWS piping were removed to the limits of the excavation layback.

The following "Rejected" Underground Injection Control (UICs) wells were decommissioned (plugged and removed) during the 308 Building demolition:

UIC – 300-72 Misc. Stream # 404
UIC – 300-73 Misc. Stream #405
UIC – 300-74 Misc. Stream # 406

Anomalies Discovered During Demolition.

No anomalies were discovered during the demolition of the 308 Building. GPERS Surveys of the completed excavation displayed background influence along the southwest edge. This is attributed to several radioactive material areas (RMA) located adjacent to the demolition boundary that elevated background readings in this area. The RMAs support 325 Building operations. To confirm soil conditions, samples were taken (reference Attachment 6). All results for radiological contaminants of concern were below Industrial Direct Lookup Values.

Attachment 2: Project Photographs

Photo 1: Looking northwest at the 308 Building on February 17, 1965.

Photo 2. Looking west at the 308 Building & 308A in April of 1999.

Photo 3. Looking south at the 308 Building on July 21, 2011 prior to demolition.

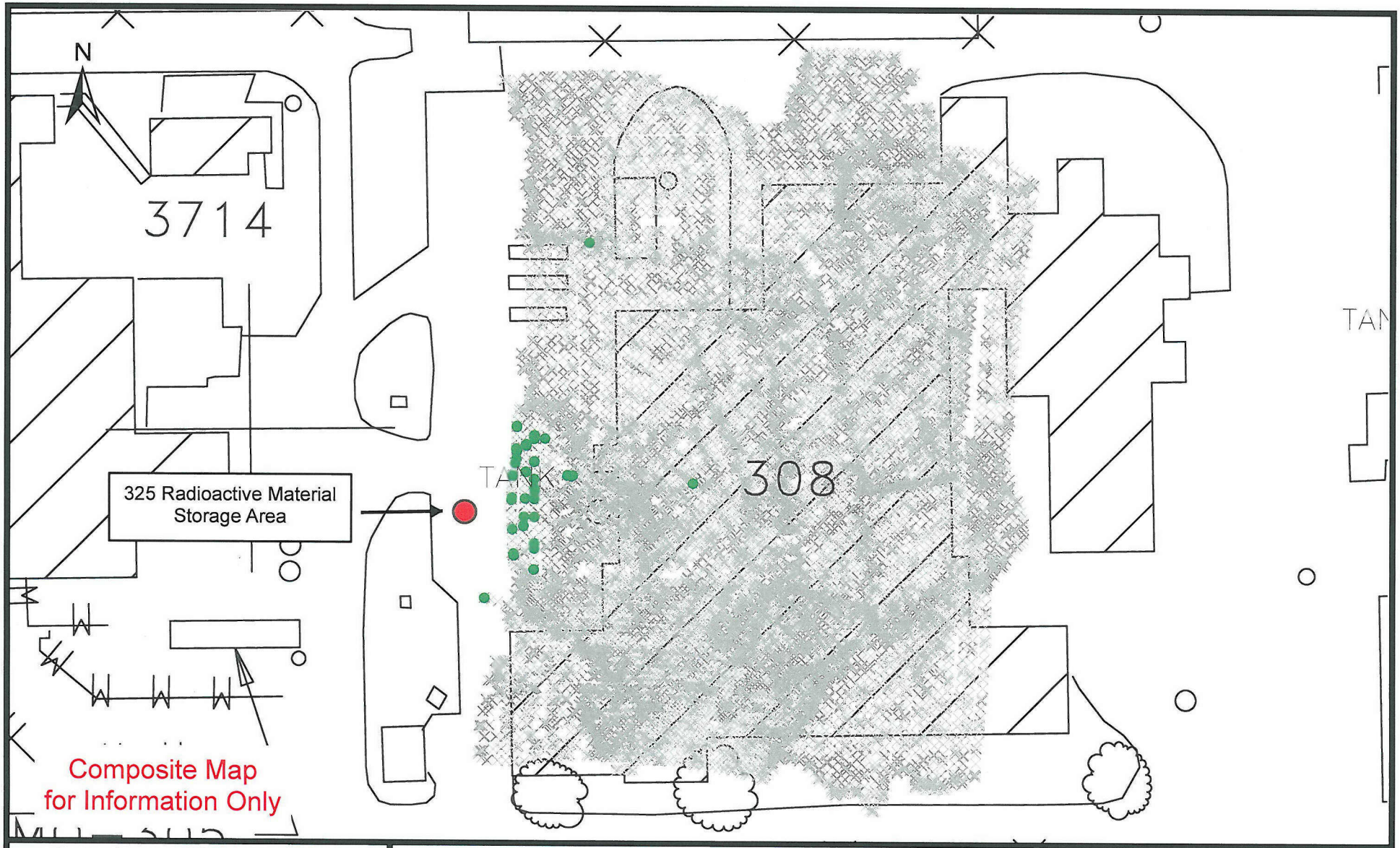
Photo 4. Looking southwest at the 308 Building following above-grade demolition of 308A on September 8, 2011.

Photo 5. Looking east at the 308 Building during above-grade demolition on March 8, 2012.

Photo 6. Looking north at 308 excavation following below-grade demolition and load-out on June 18, 2012.

Photo 7. Looking west at 308 excavation following below-grade demolition and load-out on June 18, 2012.

Attachment 3: GPERS Survey
Gamma Track (Am-141)



Legend

NET CPM

- × <1.5 x Bkg
- 1.5 x Bkg- 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Summary Statistics

Coverage Maps:120098, 102, 103 and 105
Number of Data Pnts: 84,199
Type of Survey: PHA
Max GCPM: 2,954
Avg Bkg CPM: 851
Area Surveyed: 6,200 m^2
Project File: Cmp308Ex_PHAr3
Pdf File: Comp308Ex_PHAr3

300 D4
308 Excavation
GPERS Radiological Survey
Gamma Track Map

0 5 10 15 20 25 Meters

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Survey Map Prepared By Bruce Coomer, ESI

Attachment 4: GPERS Survey
Gamma Track

Legend

NET CPM

- <1.5 x Bkg
- 1.5 x Bkg- 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Summary Statistics

Coverage Maps:120096, 97, 100, 104 and 106
Number of Data Pnts: 34,767
Type of Survey: gamma
Max GCPM: 4,580
Avg Bkg CPM: 1107
Area Surveyed: 6,200 m^2
Project File: Comp308Ex_Gr3
Pdf File: Comp308Ex_Gr3

300 D4
308 Excavation
GPERS Radiological Survey
Gamma Track Map

0 5 10 15 20 25
Meters

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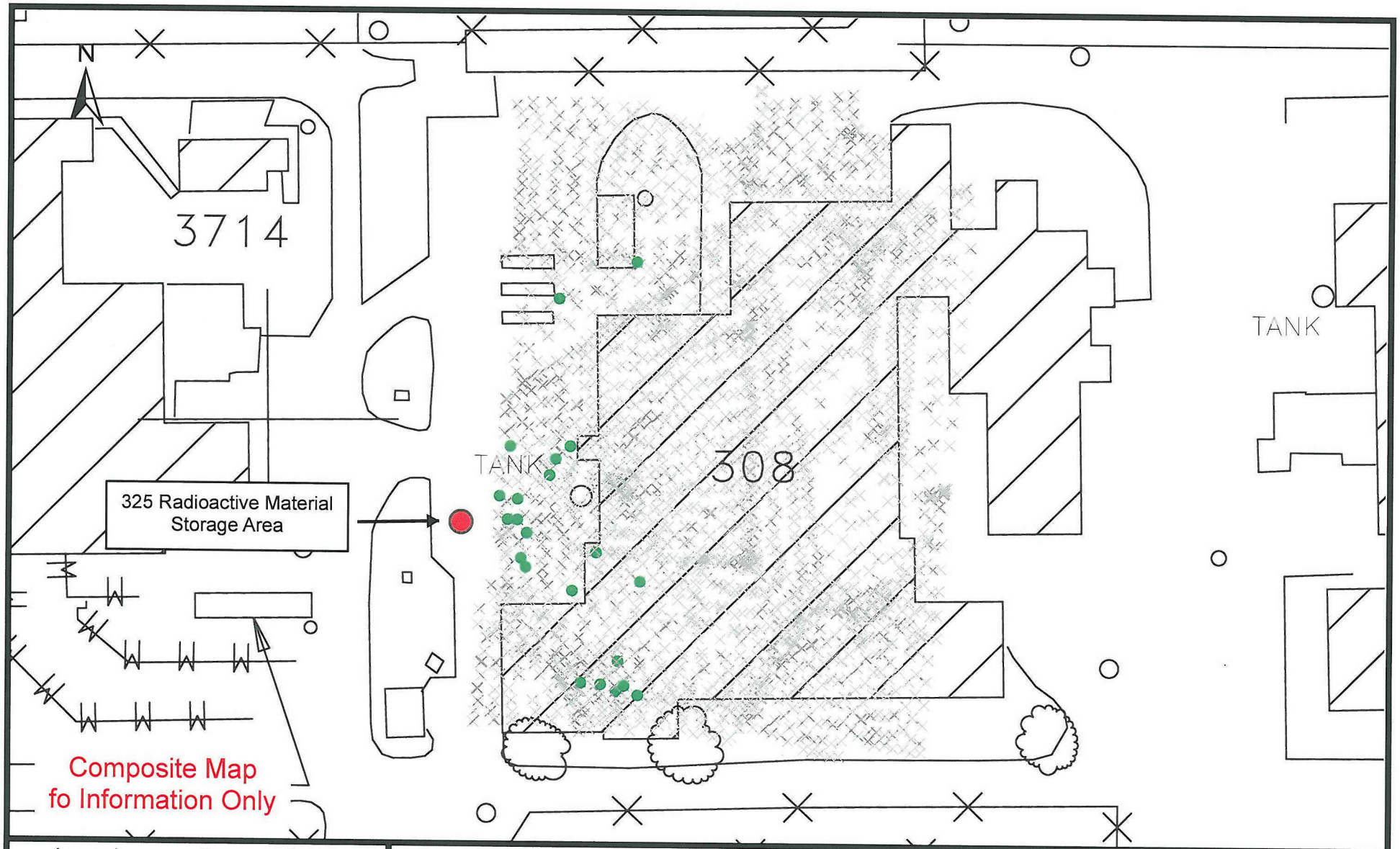
Survey Map Prepared By Bruce Coomer, ESI

Attachment 5: GPERS Survey
Beta Track



Legend

NET CPM

- <1.5 x Bkg
- 1.5 x Bkg- 5000
- 5000 - 10000
- 10000 - 25000
- 25000

Summary Statistics

Coverage Maps:120096, 97, 100, 104 and 106
Number of Data Pnts: 2579
Type of Survey: beta
Max GCPM: 1425
Avg Bkg CPM: 332
Area Surveyed: 6,200 m^2
Project File: Comp308Ex_Br3
Pdf File: Comp308Ex_Br3

300 D4
308 Excavation
GPERS Radiological Survey
Beta Track Map

0 5 10 15 20 25 Meters

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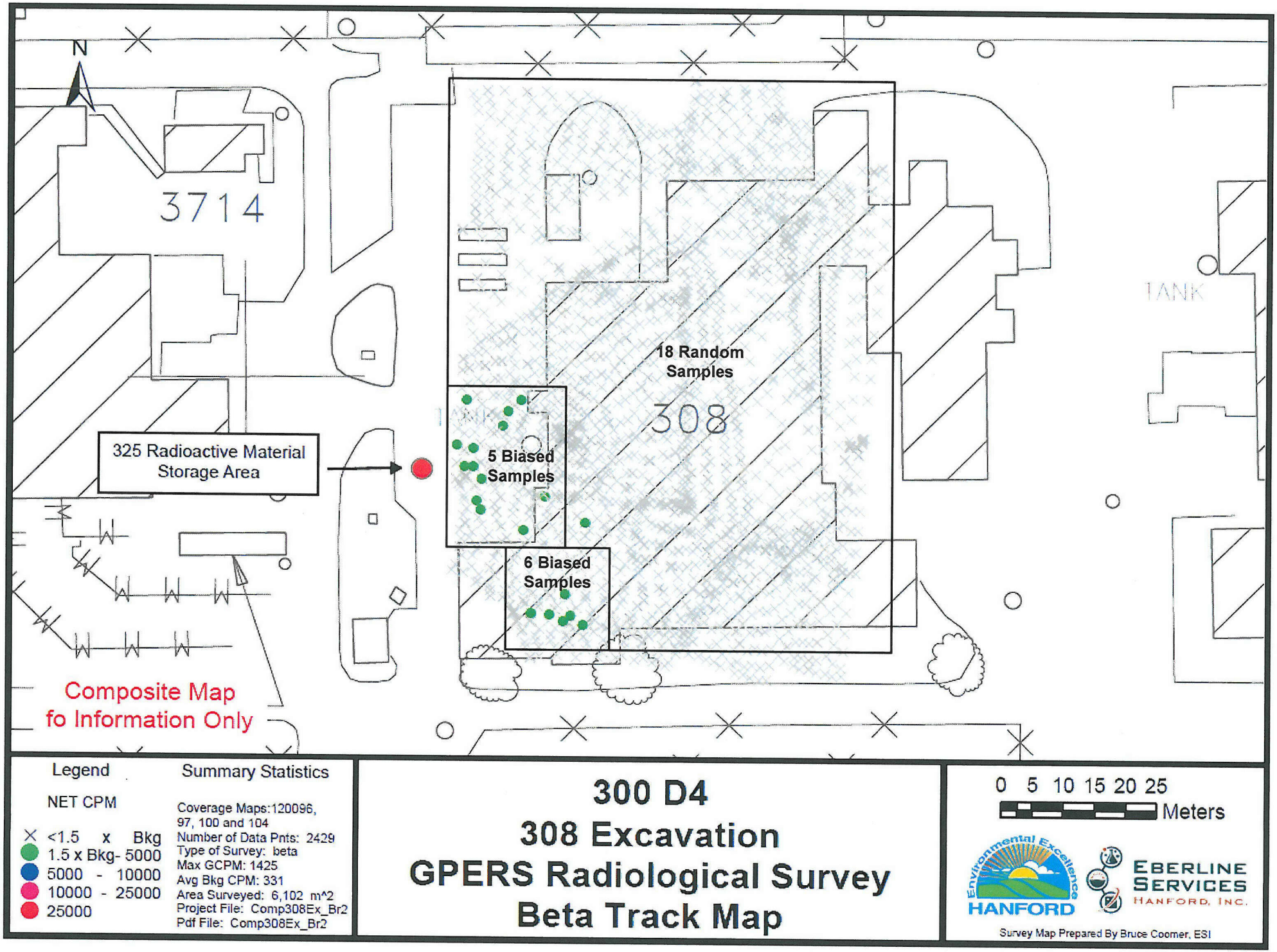
Survey Map Prepared By Bruce Coomer, ESI

Attachment 6: Soil Sample Locations and Results

308 Soil Samples

RSR ID	RCF ID	Measured pCi/g			
		Pb-212 [a]	Ra-226d [a]	Th-232d	U-238d
300PS-12-2033	33433	1.3	---	---	---
300PS-12-2033	33434	---	0.7	---	---
300PS-12-2033	33435	---	---	---	---
300PS-12-2053	33447	---	---	0.8	---
300PS-12-2053	33448	1.2	---	---	---
300PS-12-2053	33449	---	---	---	---
300PS-12-2053	33450	---	---	---	---
300PS-12-2129	33534	1.0	---	1.1	---
300PS-12-2129	33535	1.0	---	---	---
300PS-12-2129	33536	1.2	0.6	---	---
300PS-12-2129	33537	1.1	---	0.8	---
300PS-12-2129	33538	---	---	1.5	---
300PS-12-2129	33539	1.2	---	---	---
300PS-12-2129	33540	0.9	0.4	---	---
300PS-12-2129	33541	1.3	---	---	---
300PS-12-2129	33542	---	---	---	---
300PS-12-2129	33543	---	---	---	---
300PS-12-2129	33544	---	0.9	---	---
300PS-12-2129	33545	1.1	---	---	---
300PS-12-2129	33546	---	---	---	---
300PS-12-2129	33547	---	---	---	---
300PS-12-2129	33548	1.2	---	0.7	---
300PS-12-2129	33549	1.1	---	---	---
300PS-12-2129	33550	---	---	---	---
300PS-12-2129	33551	0.9	---	---	---
300PS-12-2129	33552	1.0	---	---	---
300PS-12-2129	33553	---	---	---	---
300PS-12-2129	33554	0.9	---	---	---
300PS-12-2129	33555	---	---	---	2.2
	Lookup Value			4.8	167
	Mean Hanford Background		0.561	0.945	0.763

[a] Part of U-238 decay chain


N
3714
325 Radioactive Material Storage Area
18 Random Samples
308
5 Biased Samples
6 Biased Samples
TANK
Composite Map
fo Information Only
Legend
NET CPM
<1.5 x Bkg
1.5 x Bkg- 5000
5000 - 10000
10000 - 25000
25000
Summary Statistics
Coverage Maps:120096, 97, 100 and 104
Number of Data Pnts: 2429
Type of Survey: beta
Max GCPM: 1425
Avg Bkg CPM: 331
Area Surveyed: 6,102 m^2
Project File: Comp308Ex_Br2
Pdf File: Comp308Ex_Br2
300 D4
308 Excavation
GPERS Radiological Survey
Beta Track Map
0 5 10 15 20 25
Meters
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